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DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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April 8, 1992

Mr. Richard Johnston
Chemstar Incorporated
P. O. Box 537
Grantsville, Utah 84029

Dear Mr. Johnston:

Re: Plan Review, Chemstar, Incorporated, Grantsville Quarry, M/045/028, Tooele County, Utah

The Division has completed its review of Chemstar Incorporated's revised permit application for the Grantsville Quarry, located in Tooele County, Utah. Please accept our apology for the unforeseen delay in responding to your last submittal. Unfortunately, there are a number of remaining deficiencies noted in the revised plan which will need to be resolved. We have formatted the deficiencies to coincide with the pertinent section of the Minerals rules. Please format your response in the same manner.

R647-4-105. Maps, Drawings and Photos

Are any of the indicated pre-law sites still active? - AAG

-105.1.11 The operator has provided a written description of surface and mineral ownership in the revised plan. However, a property ownership map must be provided showing pertinent surface and mineral ownership boundaries of the affected mine site area(s) and the properties immediately adjacent to the active site.

-105.3.15 The operator has requested a variance from providing a pond maintenance plan. Chemstar projects that no maintenance will be required for 25 years at the present rate of sediment deposition. The Division does not consider this as sufficient justification to grant a variance to this basic requirement. This informational request remains outstanding. - DWH

-105.3.17 A reclamation activities and treatment map to identify the location and extent of the reclamation work to be performed by the operator is still required. This was requested in the last 8/21/89 review. - AAG & HWS

R647-4-106. Operation Plan

-106.2 The operator must provide the Division with soil analyses from materials that may pose a problem to reclamation, such as the waste dumps. The analyses would be used to determine the quality of such material for revegetation purposes, and what amendments, if any, should be added to the material.

The Division recommends that the soils and/or waste overburden material (i.e. fines) be analyzed for the parameters as outlined on Attachment A. - HWS

-106.3 The operation is supposedly expanding onto a leased 200 acre area and the operator's estimate of disturbed acreage is currently 70 acres. A future mine plan covering 5 to 10 years which includes development plans for the new lease should be submitted. (requested DOGM 8/21/89) - AAG

-106.5 The operator must address the State Lands to be impacted, regarding salvageable soil or overburden material. The question of whether salvageable topsoil exists/existed in the facility area needs to be answered. Variances for other areas have been granted in the 8/21/89 review. - AAG & HWS

The operator states on page 3 of the revised plan that it has been proposed for 1990, that an area be "roped off" for testing purposes, to further prove the viability of using the waste fines as substitute soil material. Has this been done, or is it still the operator's intention to proceed with this proposal? -DWH

-106.6 A plan describing how any residual area soils, overburden and/or reject fines will be collected, stockpiled, protected from erosion and redistributed (at what depth) to disturbed areas still needs to be developed. Where will these materials be stockpiled? The stockpile locations should be clearly labelled on the surface facilities map(s). - DWH

-106.7 The Division committed earlier to provide the operator with vegetative survey information. Because of current time and workload constraints, the Division is no longer able to keep this commitment. The plant survey information must be provided by the operator. - HWS

-106.8 How was it determined that the depth to groundwater is at 4217? Chemstar has not provided a laboratory analysis of the local ground water quality. The plan states that local water is brackish. Since there are no wells in the area, a representative sample taken from an adjacent downgradient spring(s) would suffice. - DWH

The Division has requested an analysis of the water quality in the waste water pond. The revised plan gives an analysis of the solids from the waste water pond. Although this is useful information, we still request a water quality analysis of the waste water discharged to the pond. A representative sample should be obtained and analyzed from the processing plant discharge point, before it enters the waste water ditch. - DWH

R647-4-107. Operation Practices

-107.1.12 A description of the disposal of trash, scrap metal, etc., ***during*** operations needs to be submitted. - AAG

-107.6 The operator states that all currently disturbed areas will remain active for at least 5 years. The Division requires that areas no longer needed for mining be reclaimed in a timely fashion, and concurrently to active operations. The operator must incorporate into the mining and reclamation plan, plans to reclaim areas to become inactive beyond the five years described. Quarry sites, waste dumps and access roads are the most likely candidates for concurrent reclamation. - HWS

R647-4-109. Impact Assessment

-109.1 An operational impact assessment on the local surface and groundwater resources cannot be confirmed, until the Division has evaluated representative analyses of the local groundwater and processing waste water discharge. -DWH

-109.4 No highwalls will be left in the quarry. There will be 25 foot levels and the ledge faces will be brought to 45 degrees by building them up with -3/8" material. A description of the anticipated final quarry configuration, detailing the location and number of 25 foot levels and ledges remaining, should be submitted. - AAG

R647-4-110. Reclamation Plan

-110.2 The operator must provide the Division with information concerning the anticipated final grade, slope contour and configuration of the quarry/pits, waste dumps, and overburden disposal areas. Unless the variances for slopes and revegetation are requested and approved, the Division will require that these areas be reclaimed to the 70% revegetation standard. The Division recommends sloping all fill slopes to 3(h):1(v), and will not allow fill slopes greater than 2(h):1(v). - HWS

-110.3 The application must indicate which, if any, of the roads, pits, pads, utilities, and/or other associated surface facilities will remain upon final reclamation. These areas should be outlined in the text of the reclamation plan and on the reclamation treatment map.

What are the reclamation provisions for the powerlines, poles and natural gas pipelines following closure of the minesite? If these facilities will become the responsibility of another entity, then a letter must be provided to the Division, from said entity, confirming assumption of the liability.

The application indicates that an underground unit may remain following reclamation of the minesite. Please clarify what comprises this underground unit?

Please verify the statement that there are no PCB containing transformers onsite. How is a non-PCB containing transformer identified on your site? - HWS

-110.4 How does the operator propose to reclaim areas labeled as waste dumps, given the nature of this material? These areas will be very difficult to revegetate. Some type of amending procedure will no doubt be needed to insure revegetation success. - HWS

A complete reclamation plan has not been submitted at this time. With respect to the disposal of trash, the current plan states buriables will be placed in quarry sites and covered with waste fill. "Buriables" and "waste fill" need to be clearly defined. A description of which concrete foundations will be removed to the quarry and which concrete pads will remain in place needs to be submitted. A plan for reclamation of the pond needs to be submitted.

The plan states waste piles, roads, etc., will be manicured to a maximum slope of 45 degrees. What is the final size and location of the waste piles, etc.? Does the existence of waste piles conflict with the plans to use fines to cover abandoned quarry

levels and bring ledge faces to 45 degrees? No potentially deleterious materials are used or generated on site, but the plan states the "stockpiled materials that would be physical hazards would be removed as fill to quarry sites." What are the physical hazards? The waste material used in each instance needs to be identified with regard to type of material and quantity. - AAG

R647-4-111. Reclamation Practices

-111.3 Erosion Control - The plan needs to detail how reclamation will be conducted in a manner such that sediment from disturbed areas is adequately controlled. The degree of erosion control shall be appropriate for the site-specific and regional conditions of topography, soil, drainage, water quality or other characteristics. - HWS

A 45 degree fill slope may not be acceptable for erosion control, depending on the soil material and other site specific details. Supplemental erosion control measures will likely be required to stabilize slopes steeper than 2H:1V. The dimensions and reclamation of the waste water ditch were not mentioned and may not be significant, depending on ditch size. - AAG

R647-4-112. Variances Requested

R647-4-106.5 - A variance for no topsoil salvaging in the quarry and waste rock storage areas is justified and accepted by the Division

R647-4-106.7 - The operator's variance request from performing a vegetation survey will not be granted.- HWS

R647-4-110.2 - A variance for leaving quarry wall faces at 25 feet and 60 degrees may be justified, depending upon the number and location of these faces. - AAG

R647-4-111 - A variance allowing revegetation to occur by natural succession (i.e., wind forces) alone, is not acceptable. The operator must provide a revegetation plan to be included as part of the reclamation plan. This plan should be based upon the results of the Vegetation Survey. It should include provisions for regrading/recontouring, application of topsoil or substitute soil material (where appropriate), proposed seedbed preparation techniques (ripping, discing/harrowing, etc.), application of any required soil amendments, fertilizer, mulch and proposed a revegetation seedmix. - AAG/DWH

R647-4-105.3.15 - The request for a variance from development of a pond maintenance plan is denied. See comments under section R647-4-105.3.15 above. - DWH

R647-4-113. Surety.

-113.3 The operator's plan did not contain a reclamation surety estimate. This calculation would reflect the operator's cost estimate to reclaim the mine quarry and associated processing facilities area. The Division will use this estimate as a basis for determining the State's (3rd party) costs to reclaim the site.

These deficiencies must be resolved before we can proceed to grant tentative approval of this permit application. Upon issuance of tentative approval, the Division must subsequently publish a 30-day public notice seeking public comment/concerns regarding approval of the permit application. The Division will seek Board of Oil, Gas & Mining approval of the amount and form of surety after the 30-day public comment period has expired, and Chemstar has submitted the appropriate reclamation surety. Upon the Board's acceptance of the surety, the Division will forward its final permit approval to Chemstar for the Grantsville Quarry.

Again, let me express my sincere apology for the unforeseen delay in forwarding our review comments to you. I hope this delay has not caused any significant operational problems or hindrances during the interim. Please contact me, Holland Shepherd or Tony Gallegos of the Minerals permitting staff if you have questions concerning this review document.

Sincerely,

D. Wayne Hedberg

D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
Attachment
cc: Lowell Braxton, DOGM
Minerals staff (route)

ATTACHMENT A

Recommended Soil Parameters for Evaluation
on
Overburden and Native Soils

1. pH
Saturation Percentage
Soil Texture
Electrical Conductivity (EC)
Sodium Absorbtion Ratio (SAR)
Nitrate Nitrogen
Phosphorous
Potassium
Acid-Base Potential (for Overburden only)
Alkalinity

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